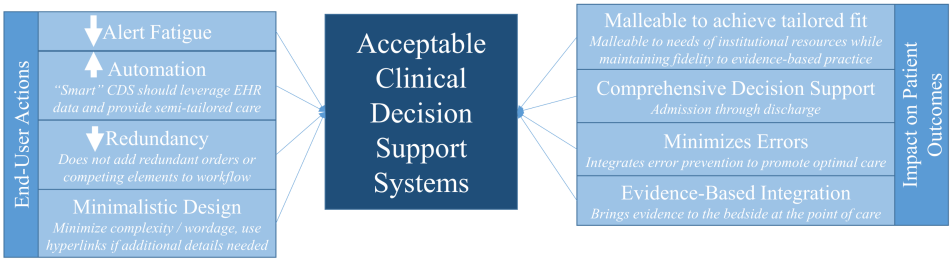
UMN Window

Evolving Description of ACTS Collaborative Participant's COVID-19 Knowledge Ecosystem Efforts

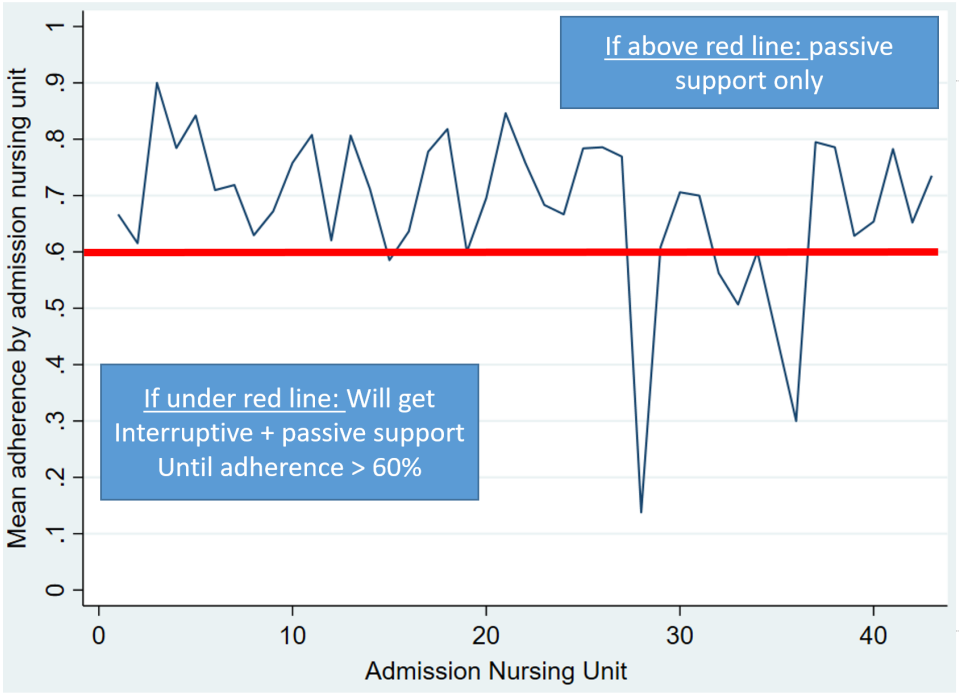
	Identify Studies	Review Evidence
Current Approach		UMN Evidence Review (earlier version - updates in progress)
Pearls/Tips Learned		
Desired Approach		
Needs to Achieve Desired Approach	Check all that apply __Better source/input materials [Details:] __Common format/terminologies for managing/sharing data [Details:] __Other [Details:]	Check all that apply __Better source/input materials [Details:] __Common format/terminologies for managing/sharing data [Details:] __Other [Details:]
Support We Can Provide Other Participants		

	Produce Guidance	Make Guidance Computable
Current Approach	UMN Anticoagulation Guidance/Protocol (see flowchart under 'expert opinions' - UMN protocol is adapted from this) • Exploring synergies with ASH, around their COVID-19 anticoagulation living guidelines	Working with C19HCC Digital Guidelines WG
Pearls/Tips Learned		1.) Generate list of variables needed for input /processing/output/evaluation of CDS 2.) Be comprehensive in generating the list 3.) Reach out to standards companies early as this process can take a few weeks-1 month
Desired Approach		1.) Collaboration with standards companies for mapping
Needs to Achieve Desired Approach	Check all that apply __Better source/input materials [Details:] __Common format/terminologies for managing/sharing data [Details:] __Other [Details:]	Check all that apply __Better source/input materials [Details:] _X_Common format/terminologies for managing /sharing data __Other [Details:]
Support We Can Provide Other Participants		1.) Partnership with data standards companies to facilitate rapid mapping of data elements

	Implement Guidance (e.g., as CDS, eCQMs)	Analyze Results (e.g., care outcomes)

Current Approach	• CXR AI Tool: https://www.healthcareitnews.com/news/university-minnesota-epic-build-new-ai-tool-detect-covid-19-x-rays • Our current CDS approach leverages either Epic's Cloud computing platform if we are rolling out AI enabled CDS • Otherwise our current approach leverages native Epic CDS functions (BPAs, etc.) • Evaluation of CDS we currently use Logicstream	1.) Processing of Epic clarity tables and B 2.) **Imperative** to develop database tracki 3.) For analysis important to do analysis o important to share the results within the in
Pearls /Tips Learned	1.) Need for CDS to be malleable to facilitate interoperability as various sites (even within same system) may have variation in practices - The biggest thing we have learned when scaling CDS across our systems (University, Community, or Rural) sites is that the CDS has to really tailor to the sites logistics/workflow. For example, at the University everyone in our Rib Fracture Care Pathway can get nutrition consults, epidurals, etc... but smaller hospitals don't have those resources. One solution is to have different orderset pre-checks based on the site's logistics 2.) Need to have expertise in house to implement these solutions 3.) VERY important to engage multidisciplinary stakeholders at EACH site early on, during implementation and immediately post implementation. Any discipline or specialty even touched by the CDS needs to be involved. We didn't engage two disciplines for a recent CDS because we figured this wasn't asking them to do anything new, just improving providers adherence to best practices, but it resulted in them getting more consults and we had to meet with them after implementation to facilitate adoption by their group. 4.) As an implementer it is imperative to be flexible on practices that do not have a strong evidence-base, but when a practice has a strong evidence-base even if there is push back internally about logistics, etc it is imperative the CDS maintains fidelity to the evidence-base. **Internal Qualitative Analysis of MD/RN/APPs identified 8 domains for acceptable CDS**  	2.) Ensure that research/implementation s /process measures etc

N = 2,503 patients	Odd
ICU admission by 48 hours	0.39
ICU admission	0.53
Mortality	0.67
Composite Outcome of ICU, Vent, Mortality, or Hospital Length of Stay > 7 days	0.75

Desired Approach	1.) Interoperable format leveraging CPG-on-FHIR 2.) Uses Provider/Unit/Hospital adherence to guide alerting, interruptive alerts (we believe) should ONLY be provided for providers/hospitals/users with low adherence. Example:  	3.) Need for real time tracking of structura 3.) Should facilitate automated feedback a based adherence with XYZ guideline
Needs to Achieve Desired Approach	Check all that apply __Better source/input materials [Details:] __Common format/terminologies for managing/sharing data [Details:] _x_Other [Details:] - We have a lot of expertise in house using native Epic CDS, but limited expertise implementing CDS hooks/Smart on FHIR/etc. Difficult toolset to find to hire also and hiring freeze due to Covid hurts ability to scale team to include additional toolsets. - Need for certification/trainings so current CDS builders can quickly learn new skills	Check all that apply __Better source/input materials [Details:] _x_Common format/terminologies for mar __Other [Details:]
Support We Can Provide Other Participants		

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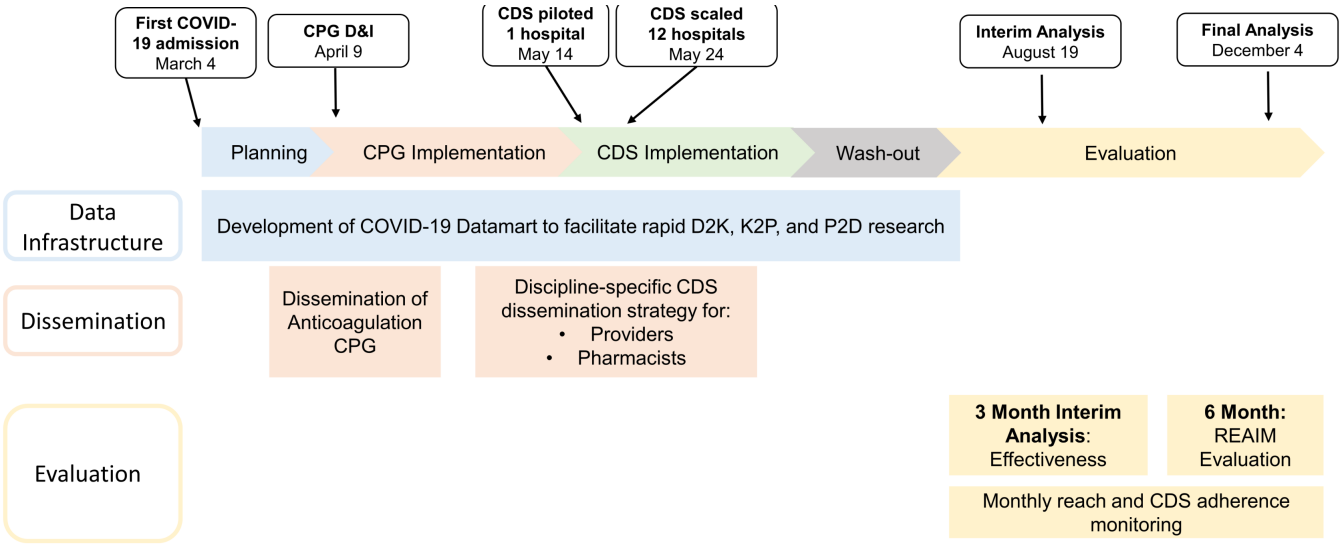
Typical implementation and evaluation plan we use internally. The timeline for this was RAPIDLY shortened as this was related to anticoagulation with CDS. For example, we only pilot tested this for 10 days before scaling.



Previous Notes

MN Current Process:

- 100 people looking at evidence on 25 targets - EBM Team
- Librarians running searches on different databased in different intervals. Ad hoc identify important papers that generate press. [Sandy - use DocSearch to identify this new information - searches clinicaltrials.gov, health rss feeds, WHO databases, pubmed, etc.]
- EBM team reviews literature, updates recommendations. Content expert team/system ops team decides what gets implemented. Teams are separate but trying to optimize going forward.
- Going forward, plan to coordinate more closely with EPC. They set up alerts about new info. Manually update SRDR with this new information. SS has team that makes ultimate decision.
    - MN EPC looking at how to abstract information from studies better to update guideline. How to automate processes better (PICO processing).
    - What kind of tools are available to support more standard/excel data capture to speed up structuring of data pulled from reviews. Or does UMN need to create the structured file for input into SRDR. Looking at published trials and also studies underway. (3 ways to get data into SRDR: 1) abstract from studies as they are reviewed, 2) input from other systems (Distiller SR/excel) - most common).
    - interested in ML/NLP support for screening process - look at a wider set of study designs. Prioritize what will be helpful for the topic. (Abstractor builds a model to see if something is relevant to a target (deep learning/neural networks) - presents to user for screening. Being rolled into SRDR.) They are watching COVID-NMA, but not using it in their work at this point. Considering supporting anticoagulation for COVID-NMA work.

MN Enhanced Process:

For Anticoagulation - optimize work/output of people/process/technology:

DocSearch -> L*VE/Epistemonikos Abstractor -> SRDR -> COVID-NMA > AU Living Guidelines C19 Digital Guideline WG - UMN CDS Implementation Team Evaluation [back to beginning]

[How secure are funding sources for these efforts? How resilient are these. Idea is to map out a cross-cutting enhancement approach and how it's being implemented in individual sites. Provide additional information (links, descriptions, regular meetings, perhaps webinars) so everyone can learn more about the individual components and how they are being combined.]